



(11) Publication number : **0 661 031 A2**

(12) **EUROPEAN PATENT APPLICATION**

(21) Application number : **94870176.8**

(51) Int. Cl.<sup>6</sup> : **A61F 13/15**

(22) Date of filing : **10.11.94**

(30) Priority : **26.11.93 JP 63525/93**

(43) Date of publication of application :  
**05.07.95 Bulletin 95/27**

(84) Designated Contracting States :  
**BE DE ES FR GB IT NL SE**

(71) Applicant : **UNI-CHARM CORPORATION**  
**182, Shimobun**  
**Kinsei-cho**  
**Kawanoe-shi Ehime-ken (JP)**

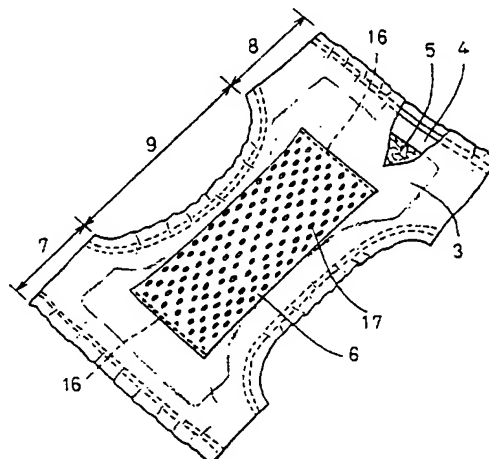
(72) Inventor : **Hironori, Nomura**  
**230, Shimokashiwa-cho**  
**Iyomishima-shi, Ehime-ken (JP)**  
Inventor : **Tohru, Sasaki**  
**1203 Yamadai,**  
**Kinsei-cho**  
**Kawanoe-shi, Ehime-ken (JP)**  
Inventor : **Toshifumi, Ohtsubo**  
**2405-1 Kawanoe-cho**  
**Kawanoe-shi, Ehime-ken (JP)**

(74) Representative : **Van Malderen, Michel et al**  
**Office van Malderen**  
**Place Reine Fabiola 6/1**  
**B-1080 Bruxelles (BE)**

(54) **Disposable training pants.**

(57) Disposable training pants including a stretchable moisture holding sheet which is bonded at its longitudinally opposite ends to the top surface of a topsheet on front and rear bodies as the moisture holding sheet is stretched in longitudinally opposite directions with respect to a crotch zone across said front and rear bodies.

**FIG.2**



**EP 0 661 031 A2**

samples, an increase in weight may be comparatively determined. The moisture holding capacity of the moisture holding sheet 6 may be controlled by providing it with perforations each having diameter of 1 to 10mm at an area ratio of 5 to 60%, as shown by Fig. 2. If the moisture holding sheet 6 is made from hydrophobic fibers, it is preferred to use such moisture holding sheet 6 after making it hydrophilic. When a stretchable sheet is employed as at least one of the top-and backsheets 3, 4 to obtain the stretchable pants 1, the moisture holding sheet 6 must have an elongation ratio higher than an elongation ratio of the pants proper 1 during the actual use of the pants 1 in order that the sheet 6 may reliably float off above the topsheet 3. For temporarily bonding the moisture holding sheet 6 over its extent defined between its longitudinally opposite ends to the topsheet 3, that is, for example, for the temporary bonding means 21, water-soluble adhesives such as polyvinylalcohol or starch glue may be employed or the sheets 3, 6 laminated together may be subjected to the emboss treatment. For permanently bonding the moisture holding sheet 6 at its opposite ends to the topsheet 3, that is, for the permanent bonding means 16, bonding technique using hot melt adhesives, the other water-insoluble adhesives or heat welding means for heat weldable material may be employed.

The backsheet 4 may be formed by a synthetic resin film such as a polyethylene film and the core 5 may be formed by a product molded from fluff pulps of a mixture of fluff pulps and super-absorbent polymer powders. Preferably, the core 5 is intermittently bonded to at least one of the top- and backsheets 3, 4.

#### Claims

1. Disposable training pants including a liquid-permeable topsheet, a liquid-impermeable backsheet, a liquid-absorbent core sandwiched between these two sheets, and make-feel-wet means provided on the top surface of said topsheet, characterized in that said make-feel-wet means comprises a stretchable moisture holding sheet having a moisture holding capacity higher than that of said topsheet and bonded at its longitudinally opposite ends by permanent bonding means to said top surface on front and rear bodies, as said stretchable moisture holding sheet is stretched in longitudinally opposite directions with respect to a crotch zone across said front and rear bodies.
2. Disposable training pants according to Claim 1, wherein said moisture holding sheet is bonded over its extent defined between said longitudinally opposite ends by temporary bonding means

to said top surface.

3. Disposable training pants according to Claim 1, wherein said permanent bonding means are water-insoluble adhesives.
4. Disposable training pants according to Claim 1, wherein said permanent bonding means are heat welding ones.
5. Disposable training pants according to Claim 2, wherein said temporary bonding means are water-soluble adhesives.
6. Disposable training pants substantially as herein described with reference to the accompanying drawings.

FIG.1

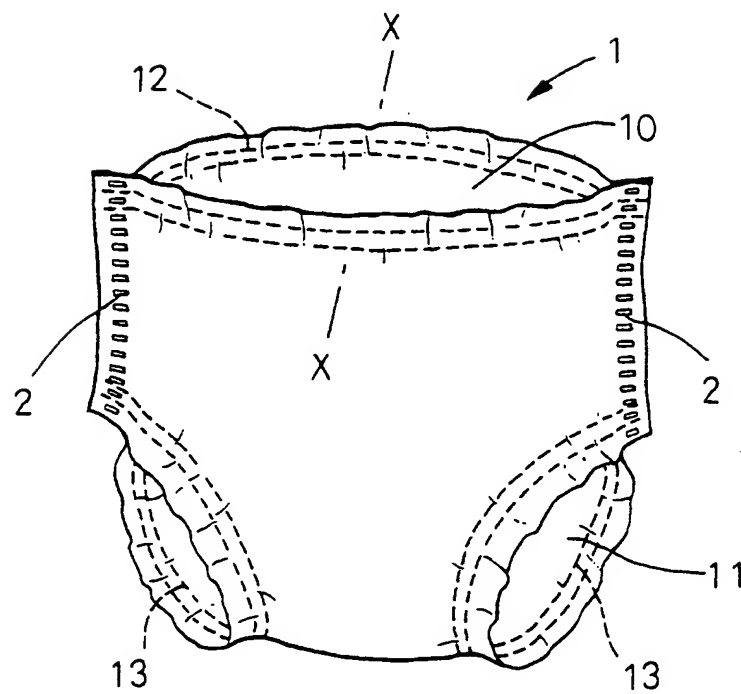
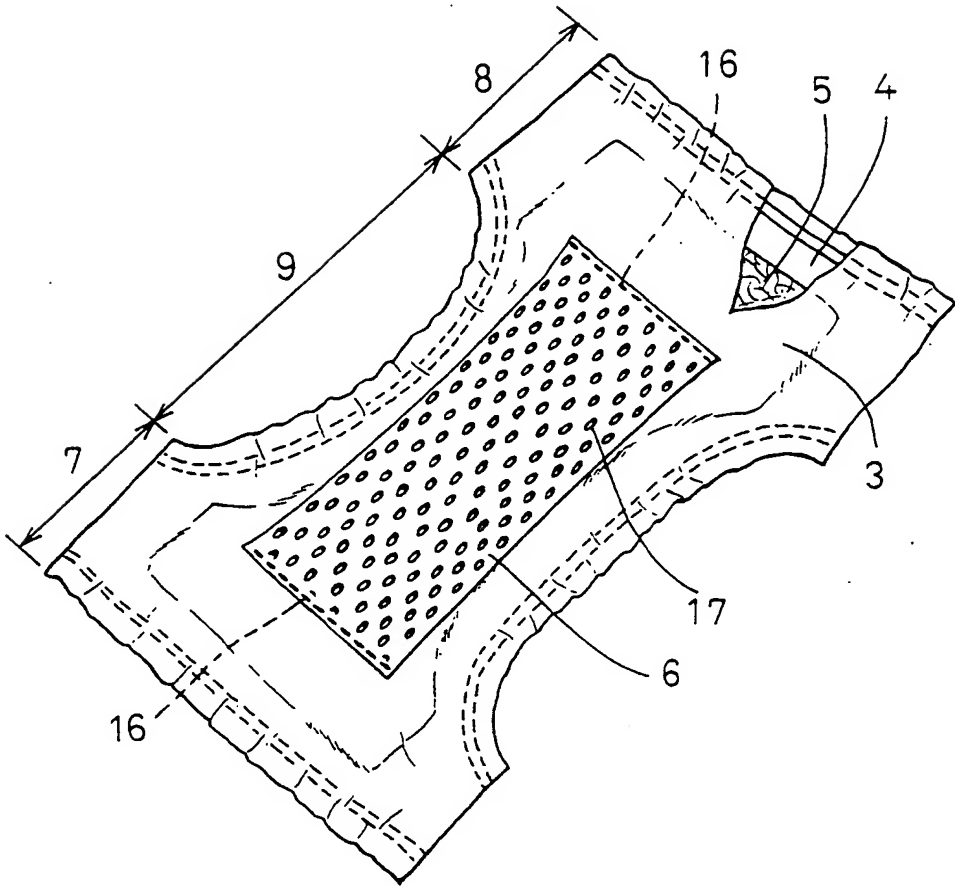


FIG.2



**FIG.3**

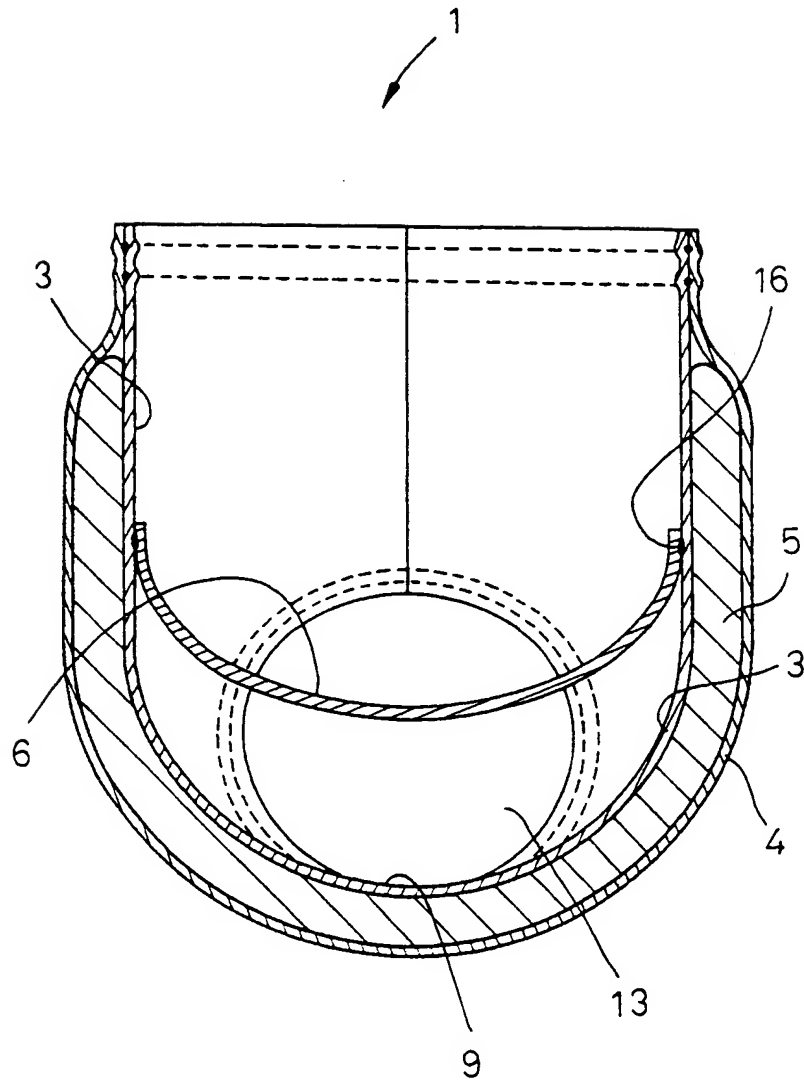


FIG.4

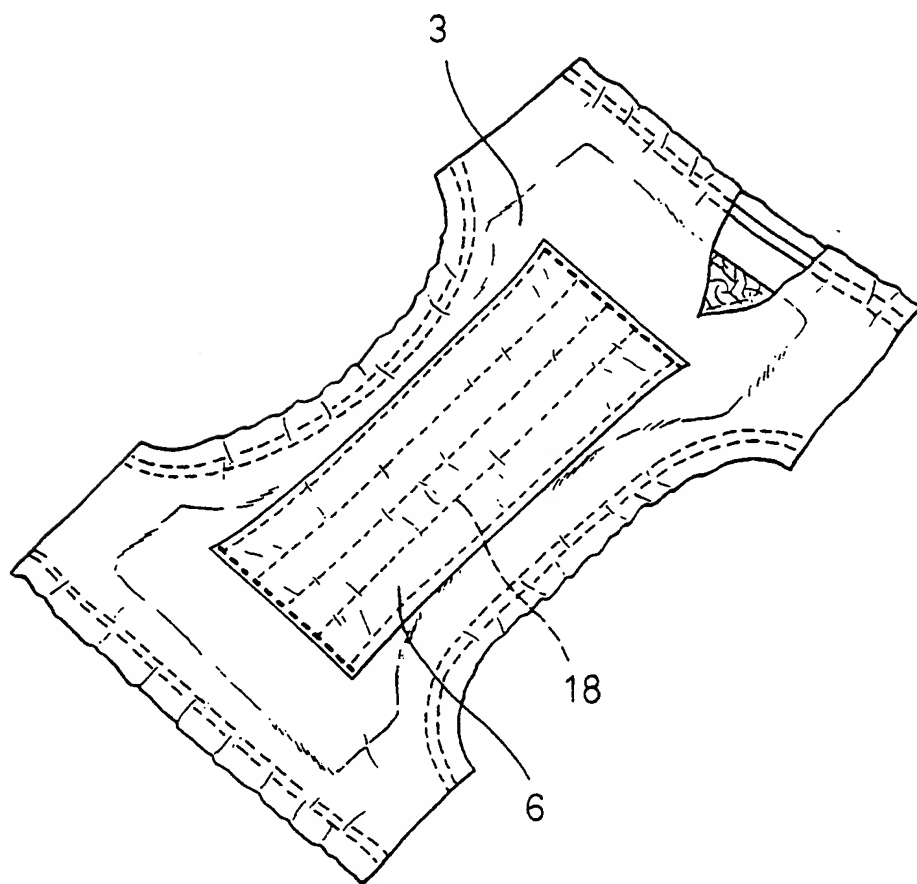


FIG.5

